

# Vatican gets behind adult stem cell research

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VATICAN CITY (RNS) Wading into one of the most controversial fields of modern medicine, the Vatican is pushing adult stem cell research as ethical and scientifically more promising than embryonic stem cell research.

That's despite assertions from many in the scientific community that that it's important to pursue all types of stem cell research, including embryonic, to maximize chances of finding cures for diseases.

Harvesting embryonic stem cells requires the destruction of fertilized embryos -- which are considered nascent human life in Catholic doctrine. Adult stem cells can be safely taken from adult human beings.

The Vatican started promoting adult stem cells in 2011, when its Pontifical Council for Culture launched a collaboration with U.S. bio-pharmaceutical company NeoStem.

The Council will host its second major conference on the issue at the Vatican this week (April 11-13), with the aim of publicizing recent research and shedding the Catholic Church's anti-science reputation.

"People don't have to choose between life and science," said Robin Smith, CEO of New York-based NeoStem and president of its nonprofit arm, the Stem for Life Foundation.

"We want to correct the misunderstanding in public opinion on adult stem cells. People need to understand how far we are with research."

A decade ago, embryonic stem cell research attracted big-name support, from Nancy Reagan to Michael J. Fox, even as it attracted strong opposition from some religious leaders and prompted tight restrictions on federally-funded research by the Bush administration. The Obama administration has loosened those restrictions.

But Smith argues adult stem cell research has been more successful; she says there are around 4,300 treatments based on adult stem cells which are now in clinical trials, and only 26 based on embryonic stem cells.

Religiously-motivated restrictions on embryonic stem cell research, however, have reduced scientists' ability to pursue it.

Doug Melton, co-director of the Harvard Stem Cell Institute told Forbes magazine in January that all types of promising stem cell research should be pursued, but embryonic remains the "gold standard against which we measure other types."

The U.S. National Institutes of Health's position is that all lines of stem cell research should continue, because even with advances in adult stem cell technology, problems persist.

"Adult stem cells are often present in only minute quantities and can therefore be difficult to isolate and purify," according to the NIH's website.

"There is also evidence that they may not have the same capacity to multiply as embryonic stem cells do. Finally, adult stem cells may contain more DNA abnormalities-caused by sunlight, toxins, and errors in making more DNA copies during the course of a lifetime."

Cardinal Gianfranco Ravasi, president of Pontifical Council, told reporters on Tuesday (April 9) that the upcoming meeting wanted to show that the Catholic Church did "not intervene only negatively" in the debate on stem cell research, and its commitment to finding cures was more than just "words."

Several leading world scientists will attend the Vatican-sponsored conference, including Britain's John Gurdon, winner of the Nobel Prize for Medicine last year.

Ravasi stressed that research can "respond to the cry of those who suffer," especially those of families who have a relative affected by a degenerative illness.

According to proponents, adult stem cells promise to radically change medicine by enhancing the body's own capacity of healing itself.

Among them will be Jonathan Sackner-Bernstein, a vice-president of NeoStem, who will present his research on patients that have suffered severe heart attacks.

Patients who survive an attack, he said, usually can't expect to live long lives.

But he hopes his research -- currently in clinical trials -- will improve life expectancy by using stem cells to "make the heart heal itself" and repair the damage done by the stroke.

Sackner-Bernstein said that adult stem cells draw on the body's own self-repair mechanisms, and "could enable patients to heal, perhaps as if they had never had the disease."

Vatican sponsorships of adult stem cells is not without controversy within the Catholic world itself.

In 2012, the Vatican's Pontifical Academy for Life was forced to cancel a conference on "Responsible Stem Cells Research." While the cancellation was officially caused by low registration, some members of the academy had complained that the lineup included researchers who had worked with embryonic stem cells, and called for a boycott of the conference.

"We don't want to stigmatize those who do research on embryonic stem cells," said the Rev. Tomasz Trafny, who heads the science department of the Pontifical Council for Culture. "It is much more useful to focus on the results and the progress of adult stem cells."

For Sackner-Bernstein, the argument for adult stem cells is scientific rather than ethical, as research has shown that embryonic stem cells are often unpredictable and can even provoke tumors.

"I don't want to trade a disease for another disease. It would be disingenuous to say we can control (embryonic stem cells), these cells are much smarter than us."